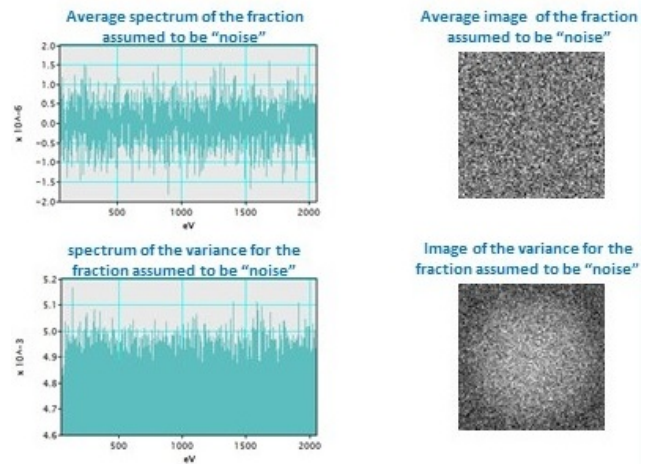
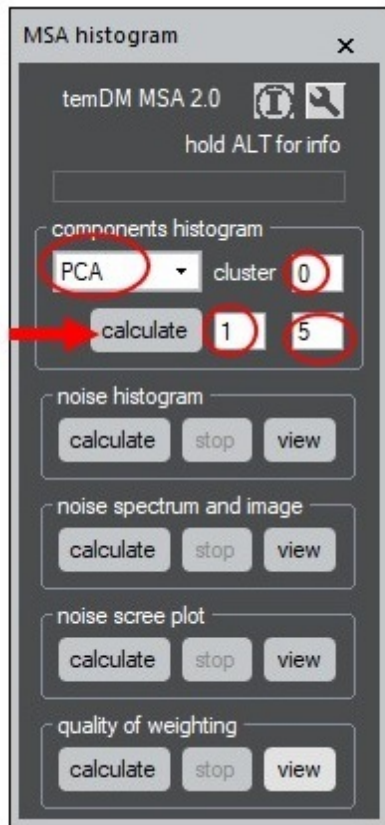
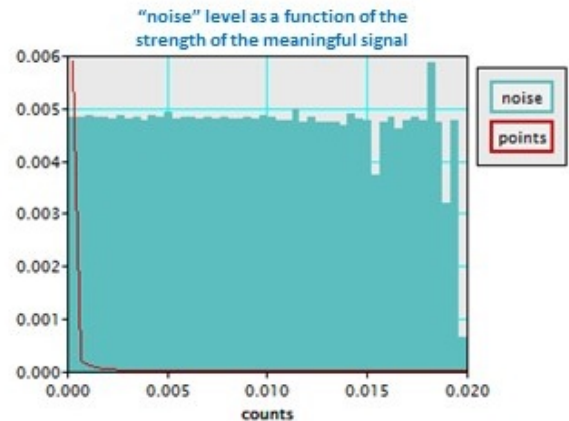
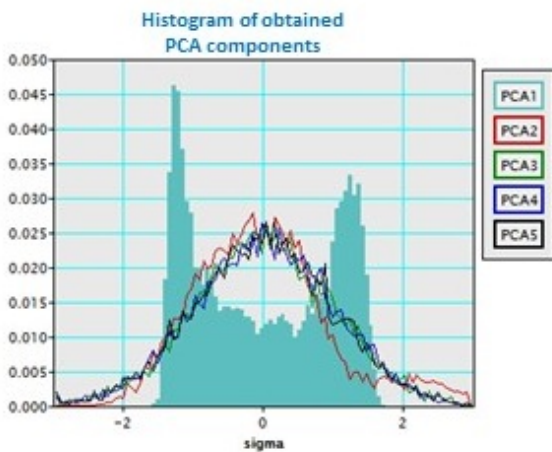


A **histogram** tool offers a plenty of options for statistical characterization of the obtained MSA results.



Another option is the prediction of a scree plot beyond the number of components you actually calculated. This is based on E.R. Malinowski “Theory of the distribution of error eigenvalues resulting from PCA with application to spectroscopic data” J. Chemometrics 1 (1987) 33-40.

You can also evaluate *a posteriori* how accurate your weighting was when you generated the matrix for MSA (**XXX MSA.dm3**). Just to remind - the weighting procedure is aimed to equalize the Poissonian noise over all pixels and energy channels. Now you can check how homoscedastic your “noise” appears at the end.



You can get the histograms of all desired components and calculate the histogram of the noise (the stuff that remains after you subtracted all available PCA components). The **histogram** tool delivers not only histograms but more information about your “noise” helping you to understand whether there is still some useful information buried in the “noise”. You get the average spectrum and average image of your “noise”. Additionally, the spectrum of the variance of the “noise” over all pixels and the image of the variance of the “noise” over all energy channels can be calculated.